

Wave function and ...

S/185/63/008/001/007/024
D234/D308

ASSOCIATION: Kyivskyy derzhuniversytet im. T. H. Shevchenka
(Kiev State University im. T. H. Shevchenko)

SUBMITTED: August 1, 1962

Card 2/2

TOLPYGO, K.B. [Tolpyho, K.B.]

Use of nonorthogonal atomic functions in deriving incomplete normalization integrals for the electrons of a NaCl type semipolar crystal. Ukr. fiz. zhur. 9 no.7:715-732 J1 '64.

(MIRA 17:10)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.

Толпыго, К.Б.

24(4)
PHASE I BOOK REPLICATION 30V/3140
Akademiya nauk Ukrainy 20R. Institute fiziki
Fotolektricheskoye i opticheskoye yavleniya v poluprovodnikakh
i opticheskoye yavleniya v sovremennoy fizike
novykh 1957 R (Fotolektricheskoye i opticheskoye
yavleniya v poluprovodnikakh. S. Kiev, 30-25
and Optika. Translations of the First Conference on Photoelectric
and Optical Phenomena in Semiconductors...) Kiev, 1959. 403 p.
Additional Sponsoring Agency: Akademiya nauk 20R. Prezidium.
M. of Publishing House: I. V. Kisina; Tech. Ed. i. A. A. Matveychuk;
Resp. Ed.: V. Ye. Lashkev, Academician, Ukrainian SSR, Academy
of Sciences.

PURPOSE: This book is intended for scientists in the field of semi-
conductor physics, solid state spectroscopy, and semiconductor
devices. The collection will be useful to advanced students in
universities and institutes of higher technical training in
specializing in the physics and technical application of semi-
conductors.

COVERAGE: The collection contains reports and information bulletins
(the latter are indicated by asterisks) from the First All-
Union Conference on Optical and Photoelectric Phenomena in Semi-
conductors. The collection covers a wide range of problems in semi-
conductor physics and technology and considers: photoconductive, photoelectro-
motive forces, optical properties, photoelectricity, photoelectro-
resistors, the properties of thin films of hard and corpuscular
radiation, the properties of thin films and complex semiconductor
structures. The materials were prepared for publication by E. I.
Shchegolev, D. V. Shitko, K. B. Tolpygo, A. P. Lubchenko, and M. K.
Sherman. References and discussion follow each article.

Photoelectric and Optical Phenomena (Cont.)	30V/3140
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Card 11/16

24(2)

AUTHORS: Moskaleiko, S. A.; Tolpygo, K. B. SOV/56-36-1-21/62

TITLE: On the Energy Spectrum of the Exciton of Mott in Ion Crystals
(Ob energeticheskom spektre eksitona Motta v ionnykh kristallakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 1, pp 149-163 (USSR)

ABSTRACT: The present paper concerns a qualitative investigation of the levels of the Mott exciton in ion crystals carried out from the point of view of the many-electron theory. Such a Mott exciton is produced in highly polarized crystals by the transition of an electron from the external closed p-shell of the anion into an unoccupied state of the s-shell of the cation. The surplus electron resulting in this way and the corresponding hole form a system which is similar to a hydrogen atom. As basic functions it is advisable to use linear combinations of the wave functions of the electrons contained in the crystal. In the second part of this paper the many-electron problem is reduced to the equation of motion of two quasi-particles, and the third part deals with the group-theoretical classification of exciton states for $K = 0$. In contradiction to Overhauser the authors from the very outset proceed from an arbitrary

Card 1/3

On the Energy Spectrum of the Exciton of Mott
in Ion Crystals

SOV/56-36-1-21/62

motion of the electron and hole. The eigenfunctions of the exciton are linear combinations of the corresponding lines of irreducible representations. From the point of view of the general deliberation discussed here, the scheme of the levels for NaCl- and CsCl-crystals must be equal because of the equal symmetry of lattices. The differences of the exciton spectra of these lattices can manifest themselves only by the arrangement and intensity of individual lines. The following paragraph deals with exciton levels in macroscopic approximation, and it discusses a very simple variant of the effective method. The last chapter deals with the theory of excitons in a Cu_2O type crystal. A figure shows the scheme of the levels of the para-exciton ($S = 0$) and ortho-exciton ($S = 1$). Transitions to these levels are possible only by spin-orbit interaction. The deliberations discussed here do not supply information concerning the correct distance between the levels. In conclusion, some particular features concerning the behavior of excitons in a magnetic field are discussed. There are 4 figures and 22 references, 5 of which are Soviet.

Card 2/3

On the Energy Spectrum of the Exciton of Mott
in Ion Crystals

SO7/56-36-1-21/62

ASSOCIATION: Institut fiziki Akademii nauk Ukrainskoy SSSR (Institute
of Physics of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: June 9, 1958

Card 3/3

I 28490-66 EPF(n)-2/EWT(1)/ETC(f)/EWG(m) IJP(c) AT

ACC NR: AP6013115

SOURCE CODE: UR/0057/66/036/004/0612/0619

62

60

E

AUTHOR: Nazarov, N. I.; Yermakov, A. I.; Tolok, V. T.

ORG: none

3

TITLE: High frequency heating of a high density plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 612-619

TOPIC TAGS: plasma heating, hydrogen plasma, ion temperature, electron temperature, plasma magnetic field, plasma oscillation, plasma resonance, cyclotron resonance, acoustic resonance,

ABSTRACT: The authors have investigated heating of hydrogen plasmas at pressures between 0.001 and 0.004 mm Hg by ionic cyclotron and fast magnetic sound waves. The plasmas were produced in the "Sneg" machine, which has been described elsewhere by the authors and collaborators (ZhTF, 32, No.5, 536, 1962). Heating was accomplished by up to 100 kW pulses of rf power at 10 MHz; resonance with the ionic cyclotron or fast magnetic sound waves was achieved by adjusting the strength of the external (pulsed) magnetic field. Double pulses of rf power were employed; the first pulse of a pair served to produce the plasma, and the second, to heat it. The longitudinal energies of the plasma particles were determined with a multigrid probe and with the electrostatic analyzer described by A.A.Kalmykov and collaborators (PTE, 5, 142, 1963). Ion masses were determined by measuring flight times in a 56 cm long drift tube. The

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UDC: 533.9

L 28490-66

ACC NR: AP6013115

technique employed by W.H.Hooke, M.A.Rothman, and J. Adam (Bull. Am. Phys.Soc., ser 2, R, 174, 1963) was used to determine the transverse energies of the plasma particles from measurements of the diamagnetic properties of the plasma. Electron temperatures were also measured spectroscopically. Plasma densities were measured with a microwave interferometer operating at wavelengths of 8.2 and 4 mm. Mean longitudinal ion energies up to 2000 eV were observed in plasmas heated at the ionic cyclotron resonance. The transverse ion energies were slightly lower; this difference is ascribed to systematic error in the measurement of the transverse energies. The mean ion energy was proportional to the square of the rf potential applied to the exciting coil. H^+ , H_2^+ , and H_3^+ ions were present; these ions all had the same energy. The mean ion energy remained constant throughout practically the full 300 μ sec duration of the heating pulse, indicating that the losses were high. The electron temperatures in these plasmas was only 20-30 eV. The ions cooled very rapidly after cessation of the pulse, with a time constant of some 10 μ sec. This rapid cooling is ascribed to charge exchange collisions with the cool neutral gas surrounding the hot plasma column. In the plasmas heated at the fast ionic sound resonance, the ion and electron temperatures were approximately the same, and equal to about 150 eV. The densities of the plasmas were not less than 10^{13} cm^{-3} in both cases. The authors thank A.A.Kalmykov for lending the electrostatic analyzer, and Academician K.D.Sinelnikov for his support and interest in the work. Orig. art. has: 2 formulas and 15 figures.

SUB CODE: 20

SUBM DATE: 22Feb65

ORIG. REF: 004

OTH REF: 001

Card 2/2 (6)

0 4/19-66 EWT(m)/EWP(w) IJP(o) EM

ACC NR: AP6016864

SOURCE CODE: UR/0198/66/002/002/0001/0013

AUTHOR: Taras'yev, G. S. (Tula); Tolokonnikov, L. A. (Tula)

ORG: Tula Polytechnic Institute (Tul'skiy politekhnicheskiy institut)

TITLE: Finite two-dimensional deformations of a compressible material

SOURCE: Prikladnaya mekhanika, v. 2, no. 2, 1966, 1-13

TOPIC TAGS: material deformation, stress concentration, nonlinear equation

ABSTRACT: The problem stated involves the finite two-dimensional deformations of a solid body, subjected to arbitrary dislocations or deformations, when the dependence of hydrostatic stress on change of volume and the rule of variation of form are arbitrary. The fundamental coordinates are assumed to be those of the body in the initial state. The problem is reduced to the solution of a nonlinear equation for a generalized stress function. An analysis of the coefficients derived shows that the compressibility of the material is reduced to a diminution of the effect of nonlinearity. The fundamental relationship described for the case of conformal mappings affords the possibility of solving the problem of stress concentration in the vicinity of variously shaped cavities. Orig. art. has: 75 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 24Jul65 / ORIG REF: 005

Card 1/1

13

PROCEDURES AND PROPERTIES INDEX

Restoration of industrial gas masks. S. A. Litvinov. *Obkhram Truda* (U. S. S. R.) 1938, No. 1, 50-61; *Akim. Referat. Zhur.* 1, No. 10, 103 (1938).—Two figures and a description of the app. for the restoration of masks filled with activated charcoal are given. Vapors of org. substances are removed by blowing with superheated steam at 100-120° and drying with hot air at 110-120°. NH₃ is removed by blowing first with air at 110-120° and then with moist air; CO by blowing with dry air until the initial wt. is restored. W. R. Hunt

METALLURGICAL LITERATURE CLASSIFICATION

TOLOBAYA, D. kandidat tekhnicheskikh nauk; MOISEYEV, G., inzhener.

Automatic traversing gears at a reinforced concrete plant.

Stroi. mat. 3 no.4:35 Ap '57.

(MLRA 10:6)

(Cranes, derricks, etc.)

SOKOLOV, K.M. YEVSTAFEYEV, S.V.; ROSTOTSKIY, V.K.; STANKOVSKIY, A.P.;
 VARENIK, Ye.I.; ONUFRIYEV, I.A.; SVESHNIKOV, I.P.; UKHOV, B.S.;
 BAUMAN, V.A.; BARSOV, I.P.; BASHINSKIY, S.V.; BOYKO, A.G.; VALUTSKIY,
 I.I.; ZAPOL'SKIY, V.P.; ZOTOV, V.P.; IVAHOV, V.A.; YAZARHOV, V.M.;
 LEVI, S.S.; MAIOLETKOV, Ye.K.; MEHENKOV, A.S.; MIROPOL'SKAYA, N.K.;
 OSIPOV, L.G.; PEREL'MAN, L.M.; PETROV, G.D.; PETROV, N.M.; POLYAKOV,
 V.I.; VATSSLAVSKAYA, L.Ya.; VAKHRAMEYEV, S.A.; VERZHITSKIY, A.M.;
 VLASOV, P.A.; VOL'FSON, A.V.; VOSHCHININ, A.I.; DZHUNKOVSKIY, N.N.;
 DOMBROVSKIY, N.G.; YEPIFANOV, S.P.; YEFREMEKO, V.P.; ZELICHENOK, G.G.;
 ZIMIN, P.A.; POPOVA, N.T.; ROGOVSKIY, L.V.; REBROV, A.S.; SAPRYKIN, V.A.;
 SOVALOV, I.G.; SOSHIN, A.V.; STARUKHIN, N.M.; SURENYAN, G.S.; TOLORAYA,
 D.F.; TROITSKIY, Kh.L.; TUSHNYAKOV, M.D.; FROLOV, P.T.; TSIRKUNOV, I.P.

Andrei Vladimirovich Konorov; obituary. Mekh. stroi. 16 no.1:32 Ja
 '59. (MIRA 12:1)

(Konorov, Andrei Vladimirovich, 1890-1958)

TOLORAYA, D. F., (Engr)

Dissertation: "On the Question of Machine Assembly and the Industrial Characteristics of the Prefabrication of Buildings in Municipal Industrial Construction." Cand Tech Sci, Moscow Inst of Engineers of Municipal Construction, 22 Jun 54. (Vechernyaya Moskva, Moscow 11 Jun 54)

SO: SUM 318, 23 Dec 1954

TOLORAYA, D.F.

A new type of gantry crane for prefabricated building. Soob.AN
Gruz.SSR 18 no.3:327-330 Mr '57. (MLRA 10:7)

1. Akademiya nauk Gruzinskoy SSR, Institut stroitel'nogo dela,
Tbilisi. Predstavleno akademikom K.S. Zavriyevym.
(Cranes, derricks, etc.)

BC

B-3-2

Working-up dried sugar beets after prolonged storage, under semi-technical conditions. Tolouchko and Schuchatko (Sov. Tech. 1984, No. 6—6, 46—48).—Raw sugar of normal quality can be obtained from such beets only by complicated purification processes. It is recommended that the saturation liquor, but not the syrup, should be treated with Norita. The decolorizing effect is 31.7% in the case of saturation, 22.2% for sulphitation, and 17.8% by Norita. CH. Abs. (c)

ASTM A. METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND SERIES										3RD AND 4TH SERIES									
SUBJECTS AND PROPERTIES INDEX																			
<p>B-L</p> <p>B-I-2</p> <p>Evaluation of activated carbons. I. P. Toloz, sumo (Nashv. Zap. Razh. Prom., 1934, 11, No. 6, Book 43, 43-63).—A method of determining the colour adsorption based on adsorption isotherms is described. Ch. Ann. (c)</p>																			
<p>1ST AND 2ND SERIES</p> <p>3RD AND 4TH SERIES</p>										<p>1ST AND 2ND SERIES</p> <p>3RD AND 4TH SERIES</p>									

TOLOTSKIY, Ye.S.

LEONOV, I.P., kandidat tekhnicheskikh nauk; TOLOTSKIY, Ye.S., doktor tekhnicheskikh nauk,

Development of Soviet shipbuilding. Sudostroenie 23 no.5:6-12 My '57.
(Shipbuilding) (MIRA 10:6)

TOLOV, Hristo

RUMANIA

MD, Candidate for Medical Sciences, Sofia, Bulgaria

Bucharest, Igiēna, Revista de Igiēna și Sanatate Publica A Uniunii
Societatilor de Stiinta Medicale din Republica Populara Romina,
No 4, July-August 62, pp 337-347.

"Influence of Increased Pulmonary Tension on the Respiratory
Mechanism of Silicosis Patients."

TOLOV, V.P.

Universal piezometric liquid level indicator. Inform. sbor. TSNIIMF
no.94 Tekh. ekspl. mor.flota no.21:77-80 '63. (MIRA 17:4)

TULUPNIKOV, A.I.. Primalni uchastnye: BAKULIN, I.I.; VIKHLYAYEV, A.P.;
DUBOROV, N.T.; KABANOV, P.N.; PIS'MENNYI, I.G.; POPOV, M.I.;
SOLOV'YEV, A.V., prof., doktor ekon.nauk, retsenzent; MAKAROV, M.P.,
prof., doktor ekon.nauk, retsenzent; GORYACHKIN, M.I., kand.nauk,
retsenzent; OKHAPKIN, K.A., kand.nauk, retsenzent; RUSAKOV, G.K.,
kand.nauk, retsenzent; MURATOV, D.G., kand.nauk, retsenzent; CHERE-
MUSHKIN, S.D., kand.nauk, retsenzent; TOLOV, V.V., retsenzent.

[Economic basis for agricultural administration] Voprosy ekonomicheskogo obosnovaniya sistem vedeniya sel'skogo khoziaistva. Moskva, 1960. 275 p. (MIRA 13:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva (for Bakulin, Vikhlyayev, Duborov, Kabanov, Pis'menny, Popov.)
(Farm management)

HRISTOV, Tv., conf.; TOLOVA, E., asist.

Contributions to the utilization of fibrous materials from
hardwood (*Ailanthus glandulosa*) in manufacturing some prin-
ting paper sorts. Cel hirtie 10 no.11:377-380 N°61

1. Institutul tehnologic din Sofia

SMIRNOV, A.I.; TOLOVA, S.V.; UL'YANINSKIY, L.S.

On the problem of the cardiac function and its reactions to the extra-cardiac nervous system in experimental myocardial infraction. Report. No.2: Effect of repeated increase of the tonus of the vagus nerve center on the course of experimental myocardial infraction. Biul.eksp. biol.i med. 47 no.8:28-33 Ag '59. (MIRA 12:11)

1. Iz fiziologicheskoy gruppy AMN SSSR (nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.I. Smirnov), Moskva.
(MYOCARDIAL INFRACT exper.)
(VAGUS NERVE physiol.)

MURATOVA, Kh.N.; TOLOVA, S.V.; UL'YANINSKIY, L.S.

Physiological justification for ligation of the internal
mammary arteries in myocardiac ischemic disease. Grud. khir.
2 no.3:24-27 My-Je '60. (MIRA 15:3)

1. Iz Instituta grudnoy khirurgii AMN SSSR (dir. - prof. S.A.
Kolesnikov, nauchnyy rukovoditel' akademik A.N. Bakulev) i gruppy
chlen-korrespondent AMN SSSR prof. A.I. Smirnova.

(HEART--DISEASES)
(MAMMARY ARTERY--LIGATURE)

RAYEVSKIY, V.S.; KUZNETS, Ye.I.; ANTIPOV, V.V.; TOLOVA, S.V.

Bioelectric currents of the cerebral cortex during various functional states of the respiratory center. Fiziol.zhur. 45 no.10:1192-1200
0 '59. (MIRA 13:2)

1. Akademiya meditsinskikh nauk SSSR, fiziologicheskaya gruppa,
Moskva.

(RESPIRATION physiol.)
(ELECTROENCEPHALOGRAPHY)

SMIRNOV, A.I.; TOLOVA, S.V.; KOVALEVA, T.N.

Functional state of the respiratory center and dynamics of
respiratory arrhythmia during increased tonus of the vagus
nerve center. Biul. eksp. biol. i med. 56 no.12:11-14 D '62.

(MIRA 17:11)

1. Fiziologicheskaya gruppa (nauchnyy rukovoditel' - chlen-
korrespondent AMN SSSR prof. A.I. Smirnov) AMN SSSR, Moskva.

SMIRNOV, A.I.; TOLOVA, S.V.; KOVALEVA, T.N.

Dynamics of the T wave of the ECG during the increase of the tonus of the vagus nerve center in dogs under normal conditions and in experimental myocardial infarct. Biul. eksp. biol. i med. 56 no.11:52-56 0 [i.e. N] '63.
(MDR A 17:11)

1. Iz fiziologicheskoy gruppy (nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.I. Smirnov) AMN SSSR, Moskva.

TOLF, O.

Chironomidae fauna of Vortsjarv. p. 166.

HYDROBIOLOGICAL MUSEUM. GIDROBIOLOGICHESKIE ISSLEDOVANIA.
Tartu. Hungary. No. 1, 1958.

Monthly List of East European Accessions (SEAI) LC, vol. 8, no. 11
November 1959.

Uncl.

TOLFA, S.

"State of Pasture in the Leba River Basin." p. 180 (GOSPODARKA WODNA, Vol. 13, No. 5, May 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10, October 1953, Unclassified.

TOLPA, S.

"Condition of pasture lands in the area of the basin of the Leba River." (To be continued) p. 139
(Gospedarka Wodna, Vol 13 No 4 Apr 53, Warszawa)

SO: Monthly List of East European Accessions, Vol 2 No 9 Library of Congress Sept 53 Uncl

KRZEMINSKA-LAWKOWICZOWA, Izabela; MAJEWSKA, Olga; TOLPA-MIEDZINSKA, Maria;
CZAJKA, Eugeniusz (Warszawa)

Electrokymographic picture of congenital heart diseases;
preliminary report. Kardiol. polska 1 no.3-4:42-50 1955.

(KYMOGRAPHY, in various diseases,
cardiovasc. defects, congen. (Pol))
(CARDIOVASCULAR DEFECTS, CONGENITAL, diagnosis,
kymography (Pol))

KRZEMINSKA-LAWKOWICZOWA, Izabela; ASKANAS, Zdzislaw; TOLPAMIEDZIENSKA, Maria; MAJEWSKA, Olga ; CZAJKA, Eugeniusz.

Electrokymography of the left ventricle in circulatory insufficiency during digitalis therapy. Kardiologia Polska 1 no.1-2:49-53 1954.

1. Z II Kliniki Chorob Wewnętrznych AM w Warszawie. Kierownik: prof. dr med. M. Semerau-Siemianowski.

(CONGESTIVE HEART FAILURE, therapy,
digitalis, electrokymography of left ventric.in)
(DIGITALIS, therapeutic use,
congestive heart failure, electrokymography
of left ventric. in)
(ELECTROKYMOGRAPHY,
of left ventric. in congestive heart failure in
digitalis ther.)

TOLPAROV, K. D., Cand Med Sci -- "Certain ^{infectious} diseases of the supporting motor apparatus in brucellosis." Ordzhonikidze, 1961. (Min of Health RSFSR. Kuban' State Med Inst im Red Army) (KL, 8-61, 265)

- 529 -

TOLPEGIN, A. (Volzhskiy)

Iakov Muzyka, the hero of Volgograd. Za rul. 19 no.12:4-5 D
'61. (MIRA 14:12)
(Volga hydroelectric power station (22d Congress of the CPSU)

L 00357-66 EWT(d)/EWT(1)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)
ACCESSION NR: AR5018948 ^{JD} UR/0276/65/000/007/B005/B005
621.755

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 7B30

AUTHOR: Tolpegin, B. D.

TITLE: Errors in correlation setting bases and their effect on precision of machining

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 95-98

TOPIC TAGS: precision machining, correlation base error, error effect analysis

TRANSLATION: It is known that the positioning of surfaces of a machined workpiece is coordinated by dimensions and correlations. This report discusses the influence exerted by errors in the arrangement of correlation setting bases, as well as errors in positioning controlled by correlations of initial and setting bases on precision of machining operation. Results obtained in the study served to establish that setting base errors should be considered separately in relation to initial dimensions and correlations. A correlation base error occurs when positioning of the initial base is erroneous in relation to the setting base which orients the workpiece in the direction of feed. Correlation base errors should be considered in two mutually perpendicular planes when specifications involve parallelism

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L 00357-66

ACCESSION NR: AR5018948

of surfaces, or in a single plane when perpendicularity is involved. Three illustrations.
A. Fomin

SUB CODE: IE

ENCL: 00

dimensional control

14

Card 2/2

L 00356-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) JD

ACCESSION NR: AR5018947

UR/0276/65/000/007/B004/B004
621.755

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 7B23

AUTHOR: Tolpegin, B. D.

TITLE: The effect of set-up errors on precision of initial dimensions in machining of surface sets

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 99-110

TOPIC TAGS: precision machining, surface set machining, initial setup error, surface set interrelation

TRANSLATION: The author notes that the normal standards for precision of a workpiece surface (i. e. dimensions, shape, and purity) and the precision of individual surface positioning relative to another surface are not adequate when machining sets of surfaces, i. e., in machining groups of surfaces on one set-up, for example, in broaching blade shafts for a gas turbine compressor. The latter operation requires additionally the incorporation of precision parameters defining the positioning of surface groups relative to

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L 00356-66

ACCESSION NR: AR5018947

each other. Surfaces comprising a set are related to each other by dimensions and correlations (internal, geometric relationships) assignable normally within a rectangular system of coordinates. The positions of two surface sets of a workpiece relative to each other are defined by external geometric relationships of their systems of coordinates. An analysis is made of precision in external relationships between surface sets of a workpiece. Partial derivatives obtained in the process of calculations facilitate an easy definition of maximum deviations of the initial external relationships from formulas contributed by the dimensional chain theory. Five illustrations. A. Fomin

SUB CODE: IE

ENCL: 00

dimensional control

Card 2/2

ACC NR: AP7005234

(N)

SOURCE CODE: UR/0145/66/000/009/0119/0122

AUTHOR: Tolpegin, B. D. (Senior instructor)

ORG: None

TITLE: Problems of accuracy in machining groups of surfaces

SOURCE: IVUZ. Mashinostroyeniye, no. 9, 1966, 119-122

TOPIC TAGS: metal machining, space geometry

ABSTRACT: The author considers the problems involved in maintaining accuracy in surface finish and positional relationships when machining an integrated set of surfaces defined as the group of surfaces machined on a single tool and oriented in the workpiece as a unified whole. The coordinating parameters which characterize the interrelationship between the surfaces which make up the complex are called intrinsic geometric relations, while those dimensions which determine the relative positions of two sets of surfaces are called extrinsic geometric relations. Methods are proposed for determining the extrinsic angular and linear geometric relations for fixing the relative positions of two sets of surfaces. Each extrinsic relation should be considered separately in calculating the accuracy of machining sets of surfaces. The article was presented for publication by G. P. Zhadin, Lecturer at the Kazan Aviation Institute. Orig. art. has: 3 figures.

SUB CODE: 13, 12/ SUBM DATE: 29May64

Card 1/1

UDC: 621.9.015

TOLPEGIN, B.D., inzh.

Adjusting readjusting machines and machine tools by test
parts. Vest. mashinostr. 44 no.5:66-67 My '64.

(MIRA 17:6)

L 114540-66 EWT(d)/EWT(1)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(1)/EWP(b) JD/H
ACC NR: AT6003156 SOURCE CODE: UR/2529/64/000/084/0099/0110

AUTHOR: Tolpegin, B. D.

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: The influence of installation errors on the accuracy of initial dimensions
in mechanical machining of complex surfaces

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no, 84, 1964. Aviatsionnaya
tekhnologiya organizatsiya proizvodstva (Aviation technology and production manage-
ment), 99-110

TOPIC TAGS: surface geometry, coordinate system, metal machining, spheric geometry,
partial differential equation

ABSTRACT: Problems of the accuracy of geometric external relations (i.e., param-
eters linking the coordinate systems of sets of surfaces of a part) are examined.
The following coordinate systems are studied: 1) of the surfaces being machined;
2) of the reference bases; and 3) of the reference surfaces of adaptation.
Equations of three-dimensional chains are obtained for the case of machining of
a subordinate set of surfaces shown in Figs. 1 and 2. These are

Card 1/5

L 114540-66

ACC NR: AT6003156 $x = (x_n - x_c) \cdot \cos \psi_c \cdot \cos \beta_c - (y_n - y_c) \cdot \sin \psi_c \cdot \cos \beta_c +$
 $+ (z_n - z_c) \cdot \sin \beta_c;$

$$y = (x_n - x_c) \cdot (\sin \psi_c \cdot \cos \varphi_c + \cos \psi_c \cdot \sin \varphi_c \cdot \sin \beta_c) +$$

$$+ (y_n - y_c) \cdot (\cos \psi_c \cdot \cos \varphi_c - \sin \psi_c \cdot \sin \varphi_c \cdot \sin \beta_c) +$$

$$+ (z_n - z_c) \cdot (-\sin \varphi_c \cdot \cos \beta_c);$$

$$z = (x_n - x_c) \cdot (\sin \psi_c \cdot \sin \varphi_c - \cos \psi_c \cdot \cos \varphi_c \cdot \sin \beta_c) +$$

$$+ (y_n - y_c) \cdot (\cos \psi_c \cdot \sin \varphi_c + \sin \psi_c \cdot \cos \varphi_c \cdot \sin \beta_c) +$$

$$+ (z_n - z_c) \cdot \cos \beta_c \cdot \cos \varphi_c,$$

where x, y, z, θ, φ , and ψ are the starting external relations. The linear reduced error of installation is determined by the formula

$$\Delta x_n = \sum \left| \frac{\partial x}{\partial P_i} \right| \cdot \Delta P_i,$$

where P_i is the dimension of the i -th independent variable and ΔP_i is the field of dispersion of values of the variable parameter. The equations of the angular

Card 2/5

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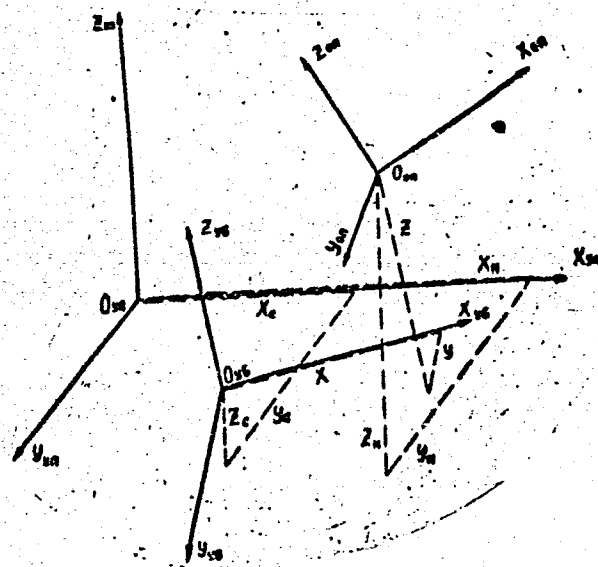


Fig. 1.

Card 3/5

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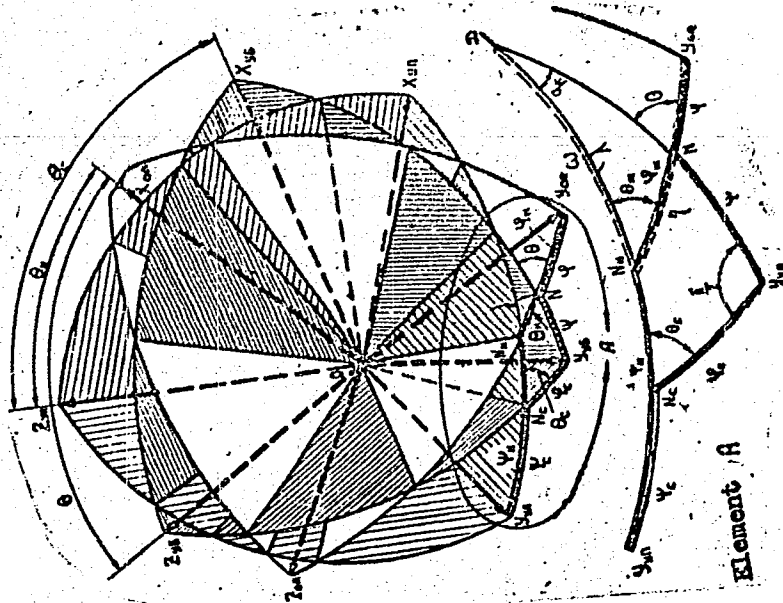


Fig. 2.

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L 14540-66

ACC NR: AT6003156

reduced errors of installation are

$$\Delta\theta = |\sin \psi_n| \cdot \Delta_c \varphi_{yB}^{yn} + |\cos \psi_n| \cdot \Delta_c \beta_{yB}^{yn};$$

$$\Delta\varphi = \left| \frac{\cos \psi_n}{\sin \theta_n} \right| \cdot \Delta_c \varphi_{yB}^{yn} + \left| \frac{\sin \psi_n}{\sin \theta_n} \right| \cdot \Delta_c \beta_{yB}^{yn};$$

$$\Delta\psi = |\cos \psi_n \cdot \operatorname{ctg} \theta_n| \cdot \Delta_c \varphi_{yB}^{yn} + |\sin \psi_n \cdot \operatorname{ctg} \theta_n| \cdot \Delta_c \beta_{yB}^{yn} + \Delta_c \psi_{yB}^{yn}.$$

The obtained equations are simple and convenient for practical calculations and can be simplified for specific cases. Orig. art. has: 17 formulas and 5 figures.

SUB CODE: 13/
12/

SUBM DATE: 01Oct63

TS
Card 5/5

TOLPEGINA, E.N., Cand Med Sci -- (diss) "^{On}~~Concerning~~ the
micromorphology of receptor innervation of ~~the~~ membranes of the
male sex^{gland} gland in ^{human}~~man~~ and certain animals." Kazan', 1959,
14 pp (Kazan' State Med Inst) 200 copies (KL, 28-59, 132)

- 125 -

TOLPESINA, T. B.
ISHIMOVA L. M., TOLPESINA T. B., ADO A. D.

Ob adrenalino-sekretornykh refleksakh s karotidnogo sinusa sobak pri bakterial'noi allergii. [Adrenalin-secretory reflexes from the carotid sinus of dogs in bacterial allergy.] Arkh. pat., Moskva 12:4 July-Aug 50 p. 21-7.

1. Of the Department of Pathological Physiology (Head -- Prof. A. D. Ado) of Kazan' State Medical Institute, Kazan'.

GLML 19, 5, Nov 50

TOLPEGINA4T8B8

600

1. TOLPEGINA, T.B.
2. USSR (600)
4. Nervous System, Sympathetic; Sympathin; Antingens and Antibodies
7. Effect of antingens on the sympathetic nervous system. Arkhiv pat., 14, No. 1, 1952. Kazan'; Iz Laboratorii Kafedry Patologicheskoy Fiziologii (Zav.-Chlen-Korr. AMN SSSR Prof. A. D. Ado) Kazanskogo Gosudarstvennogo Meditsinskogo Instituta Rec. 4 May 1951.
9. Monthly List of Russian Accessions, Library of Congress, June 1952.
UNCLASSIFIED

TOLPEGINA, T.B.; VALITOVA, E.K.

Mechanism of the allergic reaction of the gallbladder. Pat.
fiziol. i eksp. terap. 8 no.1:33-37 Ja-F '64. (MIRA 18:2)

1. Kafedra patologicheskoy fiziologii (zav.- prof. M.A. Yerzin)
Kazanskogo meditsinskogo instituta.

TOLPEKIN, S.

Economic-mathematical models and calculations of the
optimal structure of a machine-tractor depot. Vop. ekon.
no.1:100-111 Ja '64. (MIRA 17:3)

TOLPEKIN, Stefan Zakharovich, kand.ekonom.nauk; KOMAROVA, T.F., red.;
SAVCHENKO, Ye.V., tekhn.red.

[Principal methods for the over-all mechanization of agriculture]
Osnovnye puti kompleksnoi mekhanizatsii sel'skogo khozisaistva.
Moskva, Izd-vo "Znanie," 1960. 47 p. (Vsesoiuznoe obshchestvo po
rasprostraneniuiu politicheskikh i nauchnykh znani. Ser.3, Ekono-
mika, no.20). (MIRA 13:7)
(Farm mechanization)

TOLPEKIN, Ye. P., podpolkovnik med. sluzhby, kand. med. nauk

Surgical approach to the peridiaphragmal space in thoracico-abdominal
wounds. Voen.-med. zhur. no.6:81 Je '58. (MIRA 12:7)
(SURGERY, OPERATIVE)

TOLPEKINA, N., inzh.

Furnace insulation. Pozh.delo 7 no.12:9-10 D '61.

(MIRA 14:11)

(Furnaces--Standards)

TOLPEZHNIKOV, L.I., inzh.

Study of the dynamic processes on electronic models in rod
percussion drilling of holes. Izv. ~~vys.~~ uch. zav.; gor. zhur.
5 no.6:142-149 '62. (MIRA 15:9)

1. Moskovskiy gornyy institut. Rekomendovana laboratoriyey
elektronnogo modelirovaniya.
(Boring--~~E~~lectromechanical analogies)

TOLPEZHNIKOV, L.I., inzh.

Investigating the feasibility of transferring an asynchronous motor to conditions of dynamic braking without disconnection from the alternating current power line. Izv.vys.ucheb.zav.; gor.zhur. no.9:117-122 '58. (MIRA 12:6)

1. Moskovskiy gornyy institut.
(Electric motors, Induction)

Tolpin, A.I.
URPIN, A.Ya., inzhener; TOLPIN, A.I., inzhener

"A brief furniture maker's handbook." V.P.Khokhlov. Reviewed by
A.IA.Uprin, A.I.Tolpin. Der.prom.4 no.5:31 My'55. (MLRA 8:10)

1. Leningradskaya mebel'naya fabrika no.3
(Cabinet work) (Khokhlov, V.P.)

1. TOLPIN, A. I., ENG.
2. USSR (600)
4. Wood Carving
7. Mechanizing decorative wood carving. Der. i lesokhim. prom. 1 no. 6. 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

TOLPIN, I. G.

C

Searching Russian technical literature. I. G. Tolpin.
Ibid., pp. 48. ~~A description of the history of~~
Russian technical literature is given. The problems of the
American searcher are described in detail. A list is pre-
sented of the Russian abstract journal, together with some
details on the technique of Russian editing. 17 references.

TOLPIN, J. G.

SEARCHING RUSSIAN TECHNICAL LITERATURE. J. G. TOLPIN. *Ibid.*, pp. 123-24. A brief description of the history of Russian technical literature is given. The problems of the American searcher are described in detail. A list is presented of the Russian abstract journal, together with some details on the technique of Russian editing. 17 references.

High Lights of Present Day Russian Chemical Research, J. G. Tolpin, Chemical and Engineering News, v. 26, Oct. 18, 1948, p. 3096-3104, 3170.

Reviews the above as revealed by the Russian technical literature especially in the following fields: oil production and refining, petroleum chemistry, aromatic hydrocarbons, acetylene derivatives, high polymers, organosilicon compounds, alkylation, hydrogenation, dehydrogenation, decarboxylation, chlorination of hydrocarbons, isomerization, oxidation and combustion of hydrocarbons, chemistry of lubrication, petroleum substitutes, use of peat, terpenes, high-pressure research, molecular structure and chemical kinetics and catalysis. 211 ref.

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VELOCITIES AND PROPERTIES INDEX																									
<p>High lights of present-day Russian chemical research. J. C. Tolpa (Standard Oil Co. (Ind.), Chicago, Ill.). Chem. Eng. News 26, 3006-3104, 3170(1948).—A survey of chem. research activity in the U.S.S.R. as reported during the past few years in monographs, periodicals, and news accounts, with a bibliography of 211 references. E. T. C.</p>																									
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<p>CA</p> <p>Patents the USSR. J. G. Tolpin (Universal Oil Products Co., Chicago). (Chem. Eng. News 25, 431-5 (1947)). E. J. C.</p>																									
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<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									
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<p>36</p> <p>Searching the Russian Technical Literature. J. G. Tolpin. <i>Journal of Chemical Education</i>, v. 23, Oct. 1946, p. 486-489.</p> <p>Gives details concerning the various sources, their availability, and problems (other than language) encountered in their use. 17 ref.</p>																																																			
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ASSOCIATION: none

SUBMITTED: 01MAY64

NO REF SOV: 000

OTHER: 000

REF CODE: PR 1A

TOLPEGINA, E.N.

Sources of the sympathetic innervation of the membranes of male sex glands. Nauch. trudy Kaz. gos. med. inst. 14:295-296 '64.

(MIRA 18:9)

1. Kafedra anatomii (zav. - prof. A.G.Korotkov) Kazanskogo meditsinskogo instituta.

MASSINO, I.A.; TOLPEGINA, T.B.

Autosensitization of the gallbladder. Nauch. trudy Kaz. gos.
med. inst. 14:225-226 '64. (MIRA 18:9)

1. Kafedra patologicheskoy fiziologii (zav. - prof. M.A.Yerzin)
Kazanskogo meditsinskogo instituta.

TOLPEGINA, T.B., dotsent

Allergic component in the pathogenesis of diseases of the gall-bladder. Sov. med. 28 no.9:104-108 S '65. (MIRA 18:9)

1. Kafedra patologicheskoy fiziologii (zav. - prof. M.A.Yersin)
Kazanskogo ordena Trudovogo Krasnogo Znameni meditsinskogo instituta.

TOLPEZHNIKOV, V.F.

Degenerative-dystrophic lesions of the lumbosacral section of
the spine and their relation to developmental anomalies. Trudy
LIETIN no.16:326-331 '64. (MIRA 19:1)

1. 1-ya gorodskaya klinicheskaya bol'nitsa, Riga.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

SEARCHING RUSSIAN TECHNICAL LITERATURE. J. G. TOLSTY.
Ibid., pp. 485-490.—A brief description of the history of Russian technical literature is given. The problems of the American searchers are described in detail. A list is presented of the Russian abstract journals together with some details on the technique of Russian editing. 17 references.

14 2

COMMON VARIANTS NOTED

ASR-5.1A METALLURGICAL LITERATURE CLASSIFICATION

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10-I-2

Partial pressures of (gas) solvent vapours.
M. I. TOLZINA (Zhuk i Chim., 1936, No. 6, 41—43).—
A formula is given for the relation between p and t of
xytol solvents, and graphs of variation of p and t are
given for xytol and the solvent. The equilibrium
curve between xytol and the solvent is hence deter-
mined. N. G.

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Partial pressures of [gas] solvent vapors. M. I. Tolpina. *Coke and Chem.* U. S. S. R. 1936, No. 6, 41-3. A formula is given for the relation between p and t of xylene solvents and graphs of variation of p and t are given for xylene and the solvent. The equil. curve between xylene and the solvent is here detd. B. C. A.

CHERNENKO, S.A., inzh.; TOLPYGIN, P.P., inzh.

Utilization of Siberian larch in the manufacture of furniture.
Der. prom. 13 no.1:9-11 Ja '64. (MIRA 17:4)

1. Vostochno-Sibirskiy nauchno-issledovatel'skiy i proyektnyy institut
lesnoy i derevoobrabatyvayushchey promyshlennosti.

KORITYSSKIY, Ya.I., kand. tekhn. nauk; LEBEDEVA, N.N., inzh.; TOLPYGINA, G.P.,
inzh.

Effect of the dynamic unbalance and quality of the cops on spindle
vibration. Nauch.-issl. trudy VNIILTEKMASHa no.10:160-165 '63.
(MIRA 18:2)

TOLPYGINA, I. K.

TOLPYGINA, I. K.- "Excursion Method in Teaching Humanities in 8-10 Classes of Middle Schools." Leningrad State Pedagogical Institute A. I. Gertsen, Leningrad, 1955
(Dissertations for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

ACCESSION NR: AP4034933

S/0181/64/006/005/1476/1484

AUTHORS: Tolpygo, K. B.; Chayka, G. Ye.

TITLE: Distortion of the distribution function of electrons in a semiconductor by the discharge of thermocurrent and the effect of this current on the value of thermionic emission

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1476-1484

TOPIC TAGS: distribution function, semiconductor, thermocurrent, thermionic emission, Milne problem, Richardson function, work function

ABSTRACT: All works on thermionic emission have assumed that the distribution function of electrons in a semiconductor differs little from spherical symmetry. Actually, this is true only at distances from the surface large in comparison with the mean free path. The authors have examined changes in the distribution function near the surface of the semiconductor as caused by thermionic emission removing the fastest electrons. The problem is solved by a kinetic equation with boundary conditions within and at the surface of the semiconductor, in analogy with the Milne problem. The distribution function of electrons was found according to energies, angles of emission, and values of thermocurrent.

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ACCESSION NR: AP4034933

on the assumption of small drift velocity of electrons as compared with the thermal velocity. The saturation current proves to be greater than that given by the Richardson function, and this drift increases with decrease in the work function. Orig. art. has: 41 formulas.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko
(Kiev State University)

SUBMITTED: 06Dec63

DATE ACQ: 20May64

ENCL: 00

SUB CODE: EC,SS

NO REF SOV: 002

OTHER: 002

Card 2/2

LYAPIN, V.G.; TOLPYGO, K.B.

Law of $E(k)$ dispersion in hole bands of diamond type crystals
for symmetrical directions. Fiz. tver. tela 6 no. 4:1158-1166
Ap '64. (MIRA 17:6)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

ACCESSION NR: AP4041352

S/0048/64/028/006/0942/0950

AUTHOR: Korol', E.N.; Tolpygo, K.B.

TITLE: Dynamics of ZnS type crystal lattices with mixed ionic-covalent bonds and varying fractional ionic charges /Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 942-950

TOPIC TAGS: crystal lattice, oscillation, chemical bond, zinc compound, lattice deformation

ABSTRACT: The vibration of a zinc sulfide type lattice with mixed ionic-covalent bonds is treated in the harmonic approximation with the variation with lattice deformation of the ionic charges and dipole moments taken into account. The potential energy of the lattice deformation is obtained by minimizing the expectation value of the Hamiltonian with respect to variations of the valence electron wave functions. The valence electron wave functions are assumed to be appropriate superpositions of hybridized s and p orbitals of the anions and cations plus small correction terms that are determined by the minimizing process. The expectation value of the Hamil-

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ACCESSION NR: AP 4041352

tonian was calculated in an earlier paper (E.N.Korol' and K.B.Tolpy*go,Fiz.tverdogo tela 5,2193,1963), and the results of that paper are employed in the present calculation. The minimization of the average Hamiltonian with respect to the many parameters involved is performed in stages, and the final equations expressing the minimization of the Hamiltonian with respect to variations of the ionic charges and dipole moments and certain previously introduced Lagrange multipliers are treated as dynamical equations, for the time dependance of the corresponding parameters, with which vanishing masses are associated. The enlarged set of dynamical equations is subjected to a Fourier transform with respect to space and time, and the equations for the Fourier components of the displacements, charges, and dipole moments are derived. To compare the theory with experiment it is necessary to know the values of 17 crystal parameters, of which experimental values are available for only 7, namely: three elastic moduli, one piezoelectric coefficient, two dielectric constants (for high and low frequency), and the dispersion frequency. The remaining 10 parameters could be evaluated by slow neutron scattering experiments which, however, have not yet been performed for crystals of the type discussed. Orig.art. has: 34 formulas.

Card
2/3

ACCESSION NR: AP4041352

ASSOCIATION: Kafedra teoreticheskoy fiziki Kiyevskogo gosudarstvennogo universiteta
(Theoretical Physics Department, Kiev State University)

SUBMITTED: 00

ENCL: 00

SUB CODE: SS, GP

NR REF SOV: 013

OTHER: 001

373

PA 150T92

USSR/Physics - Thermoelectronic Emission Nov 49
Semiconductor Films

"Thermoelectronic Emission From Thin Semiconductor Films," K. B. Tolpygo, Inst of Phys, Acad Sci Ukrainian SSR, Kiev, 11 pp

"Zhur Tekh Fiz" Vol XIX No 11 -p.1301-11

Discusses contact of a metal with an electron semiconductor of thickness less than the Debye-Huckel length. Obtained dependency of thermoelectronic current upon temperature and upon thickness of semiconductor in absence of an external field. Brought out that measuring the

USSR/Physics - Thermoelectronic Emission 150T92
(Contd) Nov 49

contact potential difference of semiconductor-core leads to a result different from the difference of the work functions of the metal and a thick semiconductor. Derived formulas for dependence of contact potential difference upon thickness of semiconductor and its connection with thermoelectronic current. Submitted 10 Aug 48.

150T92

TOLPYGO, K. B.

PA 163T88

USSR/Physics - Lattices, Rock-Salt
Ions, Deformed Jun 50

"Physical Properties of Rock-Salt-Type Lattices
Which Are Composed of Deformed Ions," K. B. Tol-
pygo, Inst of Phys, Acad Sci Ukrainian SSR

"Zhur Eksper i Teoret Fiz" Vol XX, No 6, pp 497-509

Defines energy of interaction of neighboring ions
in approximation of strongly bound electrons as
function of their dipole moments and mutual dis-
tance. Solves equations describing lattice oscil-
lations, considering lag in interaction. Spectrum

163T88

USSR/Physics - Lattices, Rock-Salt Jun 50
(Contd)

of natural frequencies of crystalline lattice differs
essentially, for long waves, from that obtained
in Born's theory. Even the Born relation (ratio)
between dielectric constant and specific frequency
of oscillations is modified. Determines law of
dispersion and moduli of elasticity for six alkali-
halide crystals. Compares theory and experience.
Submitted 8 Jun 49.

163T88

TOLPYGO, K. B.

537.311.4
8737. The problem of the relation between contact resistance and contact p.d. M. A. KRIYOGOLAZ AND K. B. TOLPYGO, J. Tech. Phys., USSR, 31, 417-26 (April, 1951) in Russian.

Calculation of the tunnel effect through a potential barrier formed by a curvature of the conductivity zone of the semiconductor on which a metal electrode had been deposited. The influence of this effect on the contact resistance is considered for various forms of the potential barrier. In the contact model suggested by B. I. Davydov this influence is particularly strong and leads to "saturation" of the resistance with increasing contact p.d. The image forces on the metal were estimated in a certain approximation and the theory compared with A. M. Pavlenko and V. I. Lyashenko's results obtained in experiments with copper oxide. In the presence of an extraneous field, and when current passes, the curvature of the conductivity zone lower boundary is parallel to the curve of the potential due to extraneous field and space

charges and the diffusion equation applies to the current, but not when the field is too strong (i.e. takes values actually occurring on the metal/semiconductor contact faces when work functions differ considerably). At high potentials the main part of the contact resistance is concentrated in a layer 10^{-7} cm thick, and then tunnel effect becomes conspicuous. The treatment is one-dimensional. The Schrödinger equation with a potential term representing the sum of contact potential and periodic lattice potential must be solved, and this is facilitated by the elimination of the lattice potential term by Pekar's method of the effective mass, the solution itself being performed by the WKB method. It is very difficult to determine the scatter of the ψ -states obtained on the thermal lattice oscillations, but it is reasonable to assume that in a layer 10^{-7} cm thick only one scatter process occurs, that in the "classical domain" B the diffusion equation applies and that in the A domain there is only tunnel effect without scatter.

B. V. KRAUS

A.S.B. 3.1.1. METALLURGICAL LITERATURE CLASSIFICATION

101F100, K. P.

180T89

USSR/Nuclear Physics - Wave Mechanics Mar 51

"Accuracy of Method of Effective Mass in the Theory of Localized States of an Electron in a Crystal," K. P. Tolpygo, Phys Inst, Acad Sci Ukrainian SSR

"Zhur Eksper i Teoret Fiz" Vol XXI No 3, pp 443-453

Uses differential eq of auxiliary function $\psi(r)$ for solving wave eq of periodical fld $V_p(r)$ with superimposed addnl potential energy $W(r)$. In case of continuous addnl potential, problem is reduced to differential eq of higher order. This eq is transformed into Schroedinger's with effective mass in case of strong electron bond and small $W(r)$ variations.

180T89

USSR/Nuclear Physics - Wave Mechanics (Contd) Mar 51

Generalizes method and compares numerical results with those of S. I. Pekar (cf. "Zhur Eksper i Teoret Fiz" 16, pp 335, 341, 933, 1946 and ib. 17, 868, 1947).

180T89

TOLPYGO, K. P.

USSR/Physics - Semiconductors

Jan/Feb 52

"Kinetics Governing the Generation of Photoelectromotive Forces in Insulated Semiconductor," K. P. Tolpygo, Inst of Phys, Acad Sci Ukrainian SSR

"Iz Ak Nauk SSSR, Ser Fiz" Vol XVI, No 1, pp 46-58

Computes current generated in an insulated semiconductor, excited by illumination of light modulated sinusoidally or by rectangular pulses. Analyzes cases of thick samples with weak absorption and of thin samples with strong absorption. Indebted to V. Ye. Lashkarev.

218T86

USSR/Physics - Polaron, Effective Mass Mar/Apr 52

"Accuracy of the Method of Effective Mass in the Theory of Local States of an Electron in a Crystal," K.B. Tolpygo

"Iz Ak Nauk SSSR, Ser Fiz" Vol XVI, No 2, p 232

Brief contents of an article published in "Zhur Ekspert i Teoret Fiz" 21, 443, 1951. Accuracy of subject method depends on approximation of strongly-bound electrons. A derived eq generalizing eqs with effective mass in the case of high kinetic energies and small radii of electron states, is applied to computation of polaron. It is shown that if the quantum radius of electron state equals or is smaller than the lattice, the error from application of the method of effective mass is small.

2207107

TOLPYGO, K. B.

TOLPYGO, K. B.

Electric Conductivity

Determination of the effective mass of the electric-current carriers in semiconductors according to their infrared absorption. Zhur. eksp. i teor. fiz. 22 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

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PHYSICS, R. S.

USSR/Physics - Semiconductors

Sep 52

"Theory of Thermal Rectification. I. Thermoelectric Effect," K.B. Tolpygo, I.M. Tsildilkovskiy, Chair of Phys Kiev State U imeni Shevchenko

"Zhur Tekh Fiz" Vol 22, No 9, pp 1442-1454

Analyzes the effect of "thermal rectification" discovered and studied by Kh.I. Amirhanov and associates ("Iz Ak Nauk SSSR, Ser Fiz," 5, 447, 1941; "Trudy Sekts Fiz Azerbaydzhan Fil Ak Nauk SSSR," 1940; "Zhur Eksper i Teoret Fiz," 14, 187 - 195, 1944). Finds volt-amp characteristic of a homogeneous semiconductor deprived of resistances near the electrodes and having a temp gradient along the elec field. Discusses the effect for 2 boundary cases and compares results with exptl data by Amirhanov. Debated to V.Ye Lashkarev, Act Mem, Acad Sci USSR. Submitted 10 Jun 52.

227192

PA 227T89

USSR/Physics - Semiconductors,

Photoconductivity

Sep 52

"Photoelectromotive Forces in a Semiconductor
That Possesses Photoconductivity of One Sign,"
K.B. Tolpygo, Inst of Phys, Acad Sci Ukrainian SSR
"Zhur Eksper i Teoret Fiz" Vol 23, No 3,
pp 340-348

Introduces and solves, in a linear approximation,
the kinetic eqs that describe the process of cre-
ation of the photo-emf in a semiconductor illumi-
nated by sinusoidally modulated light. Proposes
that the signs of the dark and light cond coincide.
Discusses the cases of an insulated semiconductor
possessing surface levels and of a semiconductor
with electrodes applied, under the assumption that
the elec field equals zero in the absence of light.
States that the formulas obtained can serve to
evaluate concn of surface levels and lifetimes of
electrons on them, and also transparency of gap.

(PA 56 no. 668:5472 '53)

227T89

as well as the other branches were found

TOLPYGO, K. B.

DEYGEN, M.F.; TOLPYGO, K.B.

Discussion on the zonal theory of solids. Trudy Geof. inst.
no. 4:122-127 '53.

(Crystallography) (Solids)

(MLRA 7:12)

Tai PYLO K. H.

4753. mechanism of the falling-off of thermionic
emission from the cathode surface of a vacuum tube
1953

27

L 21399-66 EWT(m)/EPF(n)-2/EWP(t) IJP(c) JD/JG
ACC NR: AP6003797 SOURCE CODE: UR/0181/66/003/001/0242/0244

AUTHORS: Gorbachenko, B. I.; Tolpygo, K. B. 38

ORG: Kiev State University im. T. G. Shevchenko (Kiyevskiy gosudarstvennyy universitet) B

TITLE: Determination of the polarization energy of the NaCl crystal in the presence of positive-ion vacancy 21 21

SOURCE: Fizika tverdogo tela, V. 8, no. 1, 1966, 242-244

TOPIC TAGS: sodium chloride, crystal theory, electric polarization, crystal vacancy, positive ion

ABSTRACT: The results of a microscopic theory of crystals, developed by one of the authors (Tolpygo, UFZh v. 3, 145, 1958 and earlier papers), is used to determine the energy of polarization of a crystal by an ion vacancy, and the work necessary to remove an ion from a crystal. The particular calculations are made for the sodium ion in NaCl. The final expression for the polarization energy is in the form of the sum of the polarization energy of point charge due to

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ACC NR: AP6003797

the polarization of the electron shells only, a term of similar nature but the short-range field, a mixed term due to the long and short range forces, and a term due to the energy of the displacements of the normal coordinates into new positions of equilibrium under the influence of the applied forces. The numerical value obtained for the polarization energy of the NaCl crystal is -3.21 ev, of which 76 per cent is due to the noninertial polarization of the shells of the point-charge field. The work of removal of the positive ion is 4.77 ev, which is close to that obtained by results by others. The binding energy per cell is 7.98 ev, which is also in good agreement with other results. The agreement confirms validity of Tolpygo's microscopic theory. Crig. art. has: 8 formulas.

SUB CODE: 20/ SUBM DATE: 12Jul65/ ORIG REF: 009

UVR
Card . 2/2

TOLPYGO, K.B.

POKROVSKIY, Ya.Ye.

Remarks on K.B.Tolpygo's article "Mechanism of the decrease of thermoelectron emission of oxide cathodes operating in an impulse circuit." IA.N.Pokrovskii. Zhur.eksp. i teor.fiz. 24 no.4: 486-487 Apr '53. (MIRA 7:10)
(Cathode ray tubes) (Electron tube circuits) (Tolpygo, K.B.)

TOLPYGO, K.B.

Answer to I.A.E. Pokrovskii's remark on K.B. Tolpygo's article "Mechanism of the decrease of thermoelectron emission of oxide cathodes operating in an impulse circuit." Reviewed by K.B. Tolpygo. Zhur. eksp. i teor. fiz. 24 no. 6:746 Je '53. (MLRA 7:10)
(Cathode ray tubes) (Electron tube circuits) (Pokrovskii, I.A.E.)

TOLP 160 A B.

U S S R .

✓Application of polar concepts to the theory of thermoelectronic emission of polar semiconductors. N. D. Morgulis and L. B. Potpygn. *Dokl. Akad. Nauk SSSR*, Kiev. *Zhur. Tekhn. Fiz.* 35, 718, 22 (1959). M. and P. consider the peculiarities of the theory of thermoelectronic emission of polar semiconductors exhibiting band-type conduction and obtain the equation $W_p = (1/4) (4\pi^2 / 3) (kT/m) = 0.0047$. For BaO monocrystals containing admixts. of 10^4 to 10^5 atom. of Ba per cent as F^+ centers, the exptl. value of thermoelectronic emission W_p is 1.6 e.v., the calcd. value 1.6 e.v., indicating

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DEYGEN, M.F.; TOLPYGO, K.B.

On S.V. Tiablikov's review of S.I. Pekar's book "Studies of the electron theory of crystals." Usp. fiz. nauk 51 no.3:426-428 N '53. (MLRA 6:12)
(Crystallography)